

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 13. (Cancelled)

14. (Currently Amended) ~~The medical device of claim 13,~~ A medical device, comprising:

- a) a first compliant collagenous biomaterial;
- b) the first compliant collagenous biomaterial having an aperture extending therethrough;
- c) the first compliant collagenous biomaterial also having an extension;
- d) wherein the extension is shaped to be inserted into the aperture, has a width greater than a maximum width of said aperture, and is foldable for receipt through said aperture;
- e) a second biocompatible material disposed on the first biomaterial; and
- f) wherein an intermediate layer is disposed under the second biocompatible material.

15. (Original) The medical device of claim 14, wherein at least one of the second biocompatible material and intermediate layer comprises at least one of a submucosal tissue, mucosal tissue, collagen, partially collagenous biomaterial, and intermediate layer comprises at least one of a submucosal tissue, mucosal tissue, collagen, partially collagenous biomaterial, polytetrafluoroethylene, polyester, stainless steel, DACRON, ORLON, FORTISAN, nylon, polypropylene, polyglactin 910, polyglycolic acid, pericardium, dura tissue, facia lata, a biocompatible material, polymers, co-polymers, a synthetic material, and any combination or part thereof.

16. – 17. (Cancelled)

18. (Currently Amended) ~~The medical device of claim 17,~~ A medical device, comprising:

- a) a compliant, sealed tube configured as a leak-resistant vessel graft, the tube having a lumen extending therethrough;
- b) wherein the tube includes a first extension adjacent to a first aperture;
- c) wherein said first extension has a first extension portion received through said first aperture so as to overlie an underlying layer of material, wherein a surface of said first extension portion conforms and is bonded to the underlying layer of material by one or more of dehydrothermal bonding, crosslinking, or bonding with a resorbable or non-resorbable biocompatible bonding agent;
- d) wherein the tube comprises a collagenous extracellular matrix; and
- e) wherein the tube includes a plurality of extensions.

19. (Currently Amended) The medical device of claim ~~17~~18, wherein the tube includes a plurality of apertures.

20. (Currently Amended) ~~The medical device of claim 16,~~ A medical device, comprising:

- a) a compliant, sealed tube configured as a leak-resistant vessel graft, the tube having a lumen extending therethrough;
- b) wherein the tube includes a first extension adjacent to a first aperture;
- c) wherein said first extension has a first extension portion received through said first aperture so as to overlie an underlying layer of material, wherein a surface of said first extension portion conforms and is bonded to the underlying layer of material by one or more of dehydrothermal bonding, crosslinking, or bonding with a resorbable or non-resorbable biocompatible bonding agent; and
- d) wherein the tube includes a plurality of extensions and apertures, the extensions being inserted into the apertures.

21. (Original) The medical device of claim 20, wherein at least one of the plurality of extensions is larger than at least one of the plurality of apertures.
22. (Currently Amended) The medical device of claim ~~16~~20, wherein a second biocompatible material is disposed on the tube.
23. (Currently Amended) ~~The medical device of claim 16;~~ A medical device, comprising:
- a) a compliant, sealed tube configured as a leak-resistant vessel graft, the tube having a lumen extending therethrough;
 - b) wherein the tube includes a first extension adjacent to a first aperture;
 - c) wherein said first extension has a first extension portion received through said first aperture so as to overlie an underlying layer of material, wherein a surface of said first extension portion conforms and is bonded to the underlying layer of material by one or more of dehydrothermal bonding, crosslinking, or bonding with a resorbable or non-resorbable biocompatible bonding agent;
 - d) wherein the tube includes a plurality of extensions and apertures, the extensions being inserted into the apertures;
 - e) wherein a second biocompatible material is disposed on the tube; and
 - f) wherein an intermediate layer is disposed under the second biocompatible layer.
24. (Original) The medical device of claim 23, wherein the intermediate layer comprises at least one of a submucosal tissue, mucosal tissue, collagen, partially collagenous biomaterial, polytetrafluoroethylene, polyester, stainless steel, DACRON, ORLON, FORTISAN, nylon, polypropylene, polyglactin 910, polyglycolic acid, pericardium, dura tissue, facia lata, a biocompatible material, a synthetic material, polymers, co-polymers, and any combination or part thereof.

25. (Currently Amended) The medical device of claim ~~16~~23, wherein the extension also includes a retainer.

26. (Currently Amended) A method of creating a tube, comprising the steps of:

- a) forming at least one extension and at least one aperture on a sheet of collagenous biocompatible material;
- b) inserting the at least one extension into the at least one aperture so as to form a tube;
- c) engaging the at least one extension with the at least one aperture, wherein said engaging includes positioning a portion of the at least one extension through the at least one aperture so as to position said portion overlapping an underlying layer of the sheet of collagenous biocompatible material, wherein a surface of said portion conforms to the underlying layer of the sheet of collagenous biomaterial; and
- d) bonding the surface of said portion to the underlying layer of the sheet of collagenous biocompatible material, wherein said bonding comprises one or more of dehydrothermal bonding, crosslinking, or bonding with a resorbable or non-resorbable biocompatible bonding agent.

27. (Previously Amended) The method of creating a tube of claim 26, wherein the steps further includes the step of disposing an intermediate layer on the tube.

28. (Original) The method of creating a tube of claim 27, wherein the steps further includes the step of disposing an outer layer on the intermediate layer.

29. (Previously Amended) The method of creating a tube of claim 26, wherein said bonding comprises crosslinking.

30. (Currently Amended) A medical device, comprising:

- a) a sealed collagenous tube configured as a leak-resistant vessel graft, the tube having a lumen extending therethrough, the lumen having an inner wall;
- b) the ~~lumen~~ tube and having a plurality of extensions and apertures extending therethrough, the extensions and apertures engaging each other adjacent the inner wall; and
- c) wherein at least one of said extensions includes an extension portion received through one of said apertures so as to overlie an underlying layer of material, wherein a surface of said extension portion conforms and is bonded to the underlying layer of material by one or more of dehydrothermal bonding, crosslinking, or bonding with a resorbable or non-resorbable biocompatible bonding agent.

31. – 35. (Cancelled)

36. (Currently Amended) ~~The medical device of claim 33,~~ A medical device, comprising:
a compliant, sealed tube formed from a sheet of biomaterial comprising submucosal tissue, the tube having a lumen having a lumen wall and configured as a leak-resistant vessel graft; said lumen wall free from any continuous seam edge traversing the entire length of the tube, and said lumen wall including at least one multi-layer region formed by an extension having a surface that conforms and is bonded to the underlying layer of said sheet of biomaterial

by one or more of dehydrothermal bonding, crosslinking, or bonding with a resorbable or non-resorbable biocompatible bonding agent;

wherein the lumen wall presents a plurality of longitudinal seam edges;

wherein said seams are formed by intersections of edge portions of said sheet of biomaterial and non-edge portions of said sheet of biomaterial; and

wherein said edge portions are formed at a perimeter of said sheet of biomaterial.

37. (Original) The medical device of claim 36, wherein said tube comprises a plurality of interleaving extensions of said biomaterial.

38. (Currently Amended) ~~The medical device of claim 31,~~ A medical device, comprising:
a compliant, sealed tube formed from a sheet of biomaterial comprising submucosal tissue, the tube having a lumen having a lumen wall and configured as a leak-resistant vessel graft; said lumen wall free from any continuous seam edge traversing the entire length of the tube, and said lumen wall including at least one multi-layer region formed by an extension having a surface that conforms and is bonded to the underlying layer of said sheet of biomaterial by one or more of dehydrothermal bonding, crosslinking, or bonding with a resorbable or non-resorbable biocompatible bonding agent; and
wherein said tube comprises a seam formed by a butt joint.

39. – 45. (Cancelled)

46. (New) The medical device of claim 14, wherein said biomaterial comprises a collagenous extracellular matrix material.

47. (New) The medical device of claim 46, wherein the collagenous extracellular matrix comprises submucosal tissue.

48. (New) The medical device of claim 46, wherein the collagenous extracellular matrix material is porcine.

49. (New) The medical device of claim 18, wherein the collagenous extracellular matrix comprises submucosal tissue.

50. (New) The medical device of claim 49, wherein the submucosal tissue is porcine.

51. (New) The medical device of claim 20, wherein said tube comprises a collagenous extracellular matrix material.

52. (New) The medical device of claim 51, wherein the collagenous extracellular matrix material comprises submucosal tissue.

53. (New) The medical device of claim 54, wherein the submucosal tissue is porcine.

54. (New) The method of claim 26, wherein said sheet of collagenous biocompatible material comprises a collagenous extracellular matrix material.

55. (New) The method of claim 54, wherein the collagenous extracellular matrix material comprises submucosal tissue.

56. (New) The method of claim 55, wherein the submucosal tissue is porcine.

57. (New) The medical device of claim 30, wherein said tube comprises a collagenous extracellular matrix material.

58. (New) The medical device of claim 57, wherein the collagenous extracellular matrix material comprises submucosal tissue.

59. (New) The medical device of claim 58, wherein the submucosal tissue is porcine.

60. (New) The medical device of claim 36, wherein the submucosal tissue is porcine.

61. (New) The medical device of claim 38, wherein the submucosal tissue is porcine.